

# **Tuberculosis Prevention and Control Guidelines for Homeless Service Agencies in Seattle-King County, Washington**

First Edition  
March 30, 2004

*Endorsed by the Seattle-King County Homelessness & Tuberculosis Coalition on March 30, 2004.*

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For emergency shelters, day centers, safe havens, supportive housing programs, SROs, and other programs that work with people experiencing homelessness.

A Publication of:

*Public Health—Seattle & King County*  
Prevention Division - Tuberculosis Control Program  
Community Health Services Division - Health Care for the Homeless Network



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Washington State Department of Health - TB Program  
American Lung Association of Washington  
Homeless Health Care Los Angeles  
San Francisco Department of Public Health  
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This document is available in alternate formats upon request. Please contact Health Care for the Homeless Network or Public Health TB Control Program (contact information above).

# EXECUTIVE SUMMARY

The objective of the Seattle-King County *TB Prevention and Control Guidelines for Homeless Service Agencies* is ultimately to reduce the transmission of TB among homeless people in the Seattle-King County area. If untreated, TB can be fatal. Public Health needs the support of homeless service and housing agencies to help control TB. Agencies play a key role in this effort by assessing their program's level of TB risk, putting in place measures to reduce those risks, and helping link clients with possible active TB to a health care provider. At the time of preparation of this first edition (March 2004), Seattle-King County is struggling with an outbreak of TB among the homeless population. You should expect that these guidelines will be updated in future years as conditions change: some measures may be changed or eliminated, while new ones may be instituted.

## KEY GUIDELINES

1. Assess your agency's degree of TB risk. How easily might transmission occur, given the type of program, your target population, and the physical environment? Use these guidelines to learn about what can put your program at higher or lower risk for TB transmission.
2. Develop and implement a TB Policy that is appropriate for your type of agency.

### Working with Agency Staff & Volunteers

- Ensure that prospective employees understand the nature of TB and other communicable disease risks in your homeless agency and are provided with information about conditions (e.g., HIV/AIDS) that put people at higher risk of developing TB disease.
- Require TB training for all staff & volunteers– At hire & annual refreshers.
- Require that all staff and volunteers be tested for TB – At hire & every 6-12 months.

### Consider Your Environment

- Keep legible, dated attendance logs for at least 3 months, preferably 6 months.
- Promote good ventilation & air circulation – open windows, or use your air conditioning or heating as recommended. Monitor and clean ventilation systems as appropriate.
- Instruct clients/tenants to cover their cough. Provide tissues and masks for clients and staff. Post signs advertising availability of tissues and/or masks.
- For overnight shelters, allow as much space as possible between beds/mats, and position clients head to toe.

### Working with Clients and Tenants

- Educate clients and tenants to be aware of TB symptoms.
- Actively assess clients for TB symptoms on intake and on day-to-day basis.
- Institute a “Cough Alert” policy: listen for chronic coughers & take action.
- Link coughing clients/tenants to health care.

### Working with Public Health

- If you are unsure or have concerns about how to deal with a particular situation, or if you need help with training or supplies, contact the TB Control program or Health Care for the Homeless Network.
- If a case of TB disease is identified at your agency, work with Public Health staff. You may be asked to share attendance logs or assist in locating people who need to be evaluated for TB.

## **Resources and Key Numbers**

### **Public Health - TB Control Program**

Main line: (206) 731-4579

Ask for TB Triage Nurse

- For questions and advice related to clients with TB symptoms

Ask for TB Program Manager, Linda Lake

- For questions about TB outbreak screening and treatment procedures
- To offer feedback on these TB Guidelines

### **Public Health – Health Care for the Homeless Network**

Main line: (206) 296-5091

Heather Barr, Public Health Nurse:

(206) 296-4656 (office / voice mail)

(206) 399-4645 (cell phone / voice mail)

- For training and technical assistance requests
- For assistance with health questions on intake forms
- For help figuring out where to refer clients with symptoms
- For requests for masks, tissues, and/or posters
- To offer feedback on these TB Guidelines

### **Harborview Medical Center**

Emergency Department: (206) 731-3074

- To alert the Emergency Dept. if you are referring clients with serious TB symptoms, such as coughing up blood.

Harborview Community Care Line: (206) 223-2500

- For medical advice and direction.

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# Section 1: Purpose

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## A. Why Are Tuberculosis (TB) Guidelines Needed?

The document provides information about TB for homeless-serving agencies in King County and promotes a standard set of guidelines designed to reduce the ongoing transmission of TB among homeless people in Seattle-King County. These guidelines are written for program directors, managers, and staff, and they apply to organizations providing services for men, women, families with children, and unattached youth.

Guidelines are important because TB, if untreated, can kill people. If people who take medications for TB do not complete the medications, it may lead to forms of TB that are resistant to drugs. Because TB is frequently a disease of poverty and overcrowded living conditions, homeless people are at especially high risk for tuberculosis.

Homeless agencies and Public Health must work together as a team to prevent and control TB. Shelters, day centers, housing and other social service programs that serve people who are homeless play a vital role in helping prevent the spread of tuberculosis and other communicable diseases. Many homeless people do not receive help with their health care needs. Your agency may be the first entry point for getting homeless people into the health care system. By working collaboratively with Public Health – Seattle & King County and implementing simple policies at your facilities, you play an important and necessary role in reducing tuberculosis in our community.

TB guidelines are a “living” document:

- *TB guidelines in a community may change over time.* At the time of preparing the first edition of these guidelines, Seattle-King County is dealing with an outbreak of TB among homeless people. Our focus is therefore strongest on identifying people with active, infectious TB disease.
- *TB guidelines for Seattle-King County may differ from other cities.* Again, a city dealing with an outbreak may have a different approach to controlling TB than other cities.

The guidelines are designed to support your agency in giving you the tools you need to:

- Identify clients who may have TB symptoms
- Know how to refer people with TB symptoms to health care providers
- Ensure annual TB screening of agency staff and volunteers
- Ensure that you do not unnecessarily exclude clients from service due to unfounded fears about TB
- Do an agency self-assessment of the level of TB risk at your agency and identify ways to minimize risk

- Establish a TB Policy for your agency that covers the above topics

## B. Who Should Use These Guidelines?

The guidelines are written for directors and staff of agencies that work with homeless people. TB guidelines are important for all homeless-serving agencies, including shelters, day centers, feeding programs, housing programs, and more. Information is provided to help you assess the level of TB risk for your staff and clients, and this in turn will help you establish reasonable TB policies for your programs.

**Technical assistance** on implementing these guidelines is available from either the Public Health TB Control Program or Health Care for the Homeless Network.

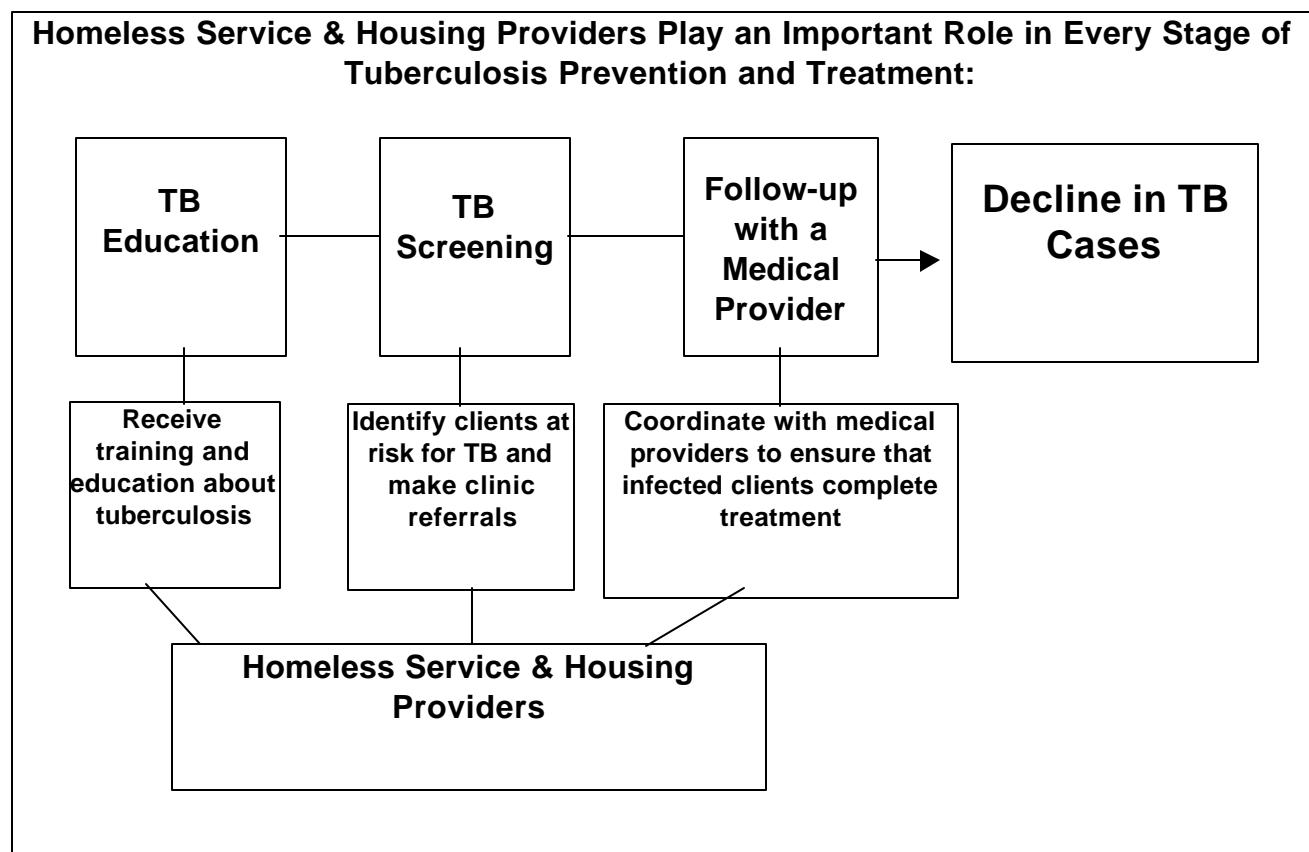


Chart is modified & used with permission from *Tuberculosis Prevention Guide for Homeless Service Providers*, prepared by Homeless Health Care Los Angeles, 2002.

## C. TB Situation in Seattle-King County

In 2002, Seattle-King County saw a marked increase in the prevalence of tuberculosis (TB) with the highest number of cases reported in the area since 1969. In 2002 and 2003, 30 of 158 (19% of all TB cases) and 35 of 156 (22%) reported TB cases were in the homeless community, respectively.



The homeless TB outbreak in Seattle during 2002-2003 reminds us that TB continues to be a serious health hazard in the homeless community. Homeless programs, shelters and day centers are among the most likely places where TB can be transmitted in Seattle and King County. TB is more easily spread in the homeless population because clients are often sleeping in close proximity to one another and may have weakened immune systems due to poor nutrition and/or other illnesses.

#### **D. About the Tuberculosis & Homelessness Coalition**

These guidelines were developed with the input and support of the Tuberculosis & Homelessness Coalition. The Tuberculosis & Homelessness Coalition for Seattle-King County was formed in June 2003 in response to the rising incidences of TB in the homeless population. Convened by Public Health–Seattle & King County Tuberculosis Control Program, the Health Care for the Homeless Network, and the American Lung Association of Washington, **the goal of the Coalition is to reduce the ongoing transmission of TB among homeless people in Seattle-King County and to protect clients and staff of homeless and housing programs**. The TB & Homelessness Coalition is comprised of representatives from the convening entities and local government, health care, and homeless service agencies. For information on the Coalition, contact Janna Wilson with Health Care for the Homeless Network at (206) 296-4655.

## Section 2: Understanding TB

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### A. What is TB?

Tuberculosis, also called TB, is an infectious disease caused by bacteria called *Mycobacterium tuberculosis*. TB usually affects the lungs (pulmonary TB) but can infect almost any organ in the body, including the kidneys, brain, or lymphatic system. TB is almost always curable with antibiotics that are readily available in the United States.

TB was once the leading cause of death in the United States. This was in large part due to poverty and overcrowded living situations that were common in the early 1900s. The incidences of TB declined significantly with improved living conditions and the discovery of an effective treatment for the disease in the 1940s. However, with the rise in immigration, homelessness, health conditions that weaken the immune system, and deterioration of TB program infrastructure in the nation due to reduced funding, the disease re-emerged as a significant public health threat in the 1980s.

About 2 million people a year die from TB worldwide. If untreated, 50% of patients with active tuberculosis disease die. However, due to the availability of effective TB medications, death from TB is rare in the United States, and, in King County the cure rate is more than 95 percent.

### B. How is TB spread?

TB is spread through the air from one person to another. It spreads when someone who has pulmonary TB coughs, talks, sings, or sneezes. TB bacteria from that person's lungs are then expelled into the air, and may be inhaled into the lungs of another person. **Exposure to TB bacteria does not always cause an infection.**

TB is much more difficult to catch than the common cold. To catch TB, a person typically has to spend quite a bit of time with someone who has pulmonary TB. People with TB disease are most likely to spread it to people they spend time with every day, including family members, friends, and coworkers.

It is not possible to get TB from sharing a glass with a person with TB, or touching a doorknob after someone with TB has used it. You cannot get TB from hugging, shaking hands or having sex with an infected person or from using a public toilet, shower or swimming pool. Mosquitoes and other insects do not transmit TB. Also, once a person with TB is on medication he or she becomes non-contagious—it may take from two weeks to up to many months to be non-contagious. Once released by their medical providers, people on medication can quickly resume their normal patterns of life without fear of spreading TB to others.

## **C. Latent TB Infection vs. TB Disease**

There is a big difference between TB infection and TB disease. It is important to understand the difference between the two in order to provide accurate information to other staff and clients and to reduce unnecessary fears about TB.

### ***Latent TB Infection***

In most people who breathe in TB bacteria and become infected, the body is able to fight the bacteria to stop them from growing. This is called latent TB or TB infection. The germ that causes TB is inside the person's body, but the person is not sick or contagious because the bacteria are inactive or dormant.

Many people who have latent TB infection never develop TB disease. In these people, the TB bacteria remain inactive for a lifetime without causing disease. But in other people, especially people who have weak immune systems, the bacteria become active and cause TB disease. To kill these sleeping bacteria and to prevent the development of active disease, persons with latent TB infection are often advised to take several months of treatment, usually with one or two medications.

### ***TB Disease***

Someone has TB disease when TB bacteria become active in the lungs (or other part of the body) because the immune system can't stop them from growing. Some people develop TB disease soon after becoming infected, before their immune system can fight the TB bacteria. Other people may develop TB disease later, when their immune system becomes weak for some reason.

People with TB disease are made sick by the bacteria being active in their body. Often they have several symptoms of TB like persistent cough, fever and weight loss. If the disease is in their lungs they can give the disease to other people. Permanent damage and death can result from this disease. Medications to cure TB are almost always effective.

## **D. Tests to Determine TB**

The TB skin test, also known as a PPD or Mantoux Skin Test, is the most common way to find out if you have TB infection. You can get a skin test at Public Health Clinics or at your doctor's office. The TB skin test is performed by injecting a small amount of testing liquid (called Tuberculin) into the skin of the forearm. The test needs to be read 48 to 72 hours later by someone trained in reading skin tests. Persons with suppressed immune systems may not react to the TB test, so other tests are often needed.

If you have a positive reaction to the skin test, your doctor or nurse may do other tests to see if you have TB disease. These tests usually include a chest x-ray and occasionally a test of the phlegm you cough up. Because the TB bacteria may be found somewhere besides your lungs, your doctor or nurse may also check your blood or urine, or perform other tests. If you have TB disease, you will need to take medicine to cure the disease.

## **E. What Are the Signs and Symptoms of TB?**

TB symptoms usually come on gradually over a period of weeks. The most common symptoms are:

- A bad cough that lasts longer than 3 weeks
- Coughing up blood
- Weakness or fatigue
- No appetite
- Weight loss
- Fever
- Chills
- Night sweats

Although most TB cases in Seattle-King County are among adults, children and youth can get TB also. Children often do not have the same symptoms of TB as adults. In general, be aware of kids who are not feeling well, especially for more than 10 days, or who are not thriving. Help them access a health care provider.

| <b><i>The Difference Between Latent TB Infection &amp; TB Disease</i></b>    |   |
|--|---|
| <b>LATENT TB INFECTION</b>   | <b>TB DISEASE</b>   |
| There are TB germs in the body.  | There are TB germs in the body.   |
| Positive skin test.  | TB skin test is not useful for identifying TB disease, because up to 20-25% of people with TB disease will have a <i>negative</i> (normal) skin test.       |
| Negative (normal) chest x-ray.   | Positive (abnormal) chest x-ray.  |
| No symptoms.   | There may be symptoms that include:<br>Coughing (for more than 3 weeks)<br>Coughing up blood<br>Weakness or fatigue<br>Weight loss<br>Night sweats<br>Fever |
| NOT contagious.  | Contagious if there is TB in the lungs and it is not properly treated.  |
| At risk for developing TB disease in the future.                             | TB disease is already active in the lungs or another part of the body.  |
| Generally one antibiotic for 6-9 months to prevent TB disease in the future. | A combination of antibiotics will be prescribed for at least 6 months.  |

This table has been adapted, with permission, from the *Tuberculosis Prevention Guide for Homeless Service Providers*, prepared by Homeless Health Care Los Angeles, 2002.

## **F. Treatment of Active TB**

There is good news for people with TB disease: TB disease can almost always be cured with medicine. But the medicine must be taken exactly as instructed by a health care provider. To treat TB, several antibiotics need to be taken together over a period of usually 6 months to a year. For this treatment to work, it's vital that these medicines be taken regularly and that the full treatment cycle be completed. Lengthy treatment is necessary because the bacteria grow very slowly and hide very well.

People with TB disease of the lungs are usually infectious and should stay away from shelters, day centers, work, school, or other public places so that the TB bacteria are not spread to other people. After taking TB medicine for a few weeks, people feel better and a test by their medical provider will determine when they are no longer contagious. Even after starting to feel better, one must keep taking the medication until directed otherwise by a health care provider.

People who need extra support in taking their TB medications may be provided with Directly Observed Therapy (DOT). DOT consists of a health care worker meeting with a person and observing them swallowing their TB medication on a daily or twice weekly basis. DOT is an extremely effective treatment method that allows careful monitoring to ensure that treatment is completed and to observe any side effects of the medication.

## **G. Who is At Risk for TB?**

Many people who have TB infection never develop TB disease. But some people with TB infection are at **high risk** for developing TB disease. They include:

- people with HIV/AIDS
- people who became infected with TB bacteria in the last 2 years
- babies and young children (younger than five years old)
- substance abusers
- people who are sick with other diseases or conditions that weaken the immune system (such as diabetes, cancer, malnutrition, kidney disease)
- elderly people
- people who were not treated correctly for TB in the past

The Centers for Disease Control (CDC) recommends that people with latent TB infection (a positive skin test reaction) who are in one of the above high-risk groups take preventive medicine to keep from developing TB disease.

## **H. Environmental Risk Factors for TB**

Several factors in the homeless shelter/day center/SRO environment influence the likelihood of TB transmission. The following describes the major environmental factors that affect the spread of TB in a facility.

### **Population density**

The number and population density of persons sharing the same breathing space is an important transmission factor in facilities serving homeless people. If all other factors are constant, the size of the shelter population is directly proportional to the likelihood that someone with infectious TB will be present and that someone else will become infected. Conversely, the smaller and less crowded the shelter, the lower the risk.

### **Close proximity of beds/mats in residential settings**

The risk of disease transmission increases when beds or mats are placed very close together and when clients are sleeping head-to-head, because it means clients are sharing the same air space.

**Poor air circulation due to inadequate ventilation**

The probability of transmission is also affected by building ventilation. During periods of peak occupancy, it may be difficult for homeless facilities to provide ventilation at adequate levels. Adequate ventilation requires the constant circulation of air - old air must be vented out of the building and fresh air must be pumped in from outside of the building. In some buildings, opening windows is a simple way to improve air quality and ventilation in enclosed spaces.

**Inadequate agency infection control methods**

TB transmission is more likely if homeless agency staff are not trained to recognize the signs and symptoms of TB. It is more likely that TB will be spread if agency staff and volunteers are not screened annually and clients are not closely monitored and encouraged to cover their mouths when sneezing or coughing, and get medical evaluations when they show TB symptoms.

# Section 3: Creating a TB-Free Environment at Your Agency

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## A. Assess the TB Risk at Your Facility

The risk of tuberculosis transmission in a given facility differs depending on population density (how many people occupy the space), the physical environment (walls, ventilation and space between clients), and other infection controls (health assessment of clients, agency cough alert policy). Shelters, day centers, and other facilities that serve clients in a congregate setting are likely to have clients breathing the same air. As a result, TB is a greater risk in these settings. For example, a crowded single adult shelter where people sleep on mats is an environment that is far more conducive to spreading TB than is a family shelter where households each have a separate living unit. There are also populations of clients that are more likely to develop tuberculosis disease: for example, people with medical conditions such as HIV/AIDS, diabetes, and cancer; people who inject intravenous street drugs; and recent immigrants (within 5 years of arrival) from countries where TB is common.

Listed below are key characteristics to help you assess your agency's level of risk for TB transmission. You may have the ability to influence some of these factors (such as whether staff are trained about TB), while others simply relate to your core mission and your target population. It is important that you assess and understand the level of risk in your agency, and take appropriate steps in response.

| Higher Risk  | Lower Risk   |
|--|--|
| <ul style="list-style-type: none"><li>▪ Crowded conditions; clients sleep close together</li><li>▪ Clients spend a lot of time in close quarters (e.g., sleeping or visiting in common rooms)</li><li>▪ Poor ventilation / closed windows; or the incorrect use of a ventilation system</li><li>▪ Staff not well educated about TB</li><li>▪ Clients/tenants are not educated about TB</li><li>▪ Clients not instructed to cover coughs</li><li>▪ Program serves high risk groups</li><li>▪ No TB Policy</li><li>▪ Presence of an undiagnosed person with active TB in the environment</li></ul> | <ul style="list-style-type: none"><li>▪ Separate dwelling units</li><li>▪ Clients are in &amp; out of program quickly</li><li>▪ Good ventilation &amp; environmental controls</li><li>▪ Management requires and all staff participate in regular TB trainings</li><li>▪ Clients are educated – pamphlets &amp; signage</li><li>▪ Clients use masks &amp; tissues to cover coughs</li><li>▪ Program serves low-risk homeless population</li><li>▪ Agency has &amp; implements a TB Policy</li></ul> |

**SROs, Supportive Housing Programs, and Transitional Housing Program.** Keep in mind that staff, tenants, and case managers of single-room occupancy (SRO) and supportive housing programs are at risk for TB exposure, even though clients may have separate units. Conditions in these facilities can still be quite crowded. Tenants and staff may spend time in crowded TV or computer lounges,



lobbies, meal areas, and other common rooms. The populations tend to be formerly homeless people, many with serious health, mental health, and substance abuse issues. It is essential that these facilities—like shelters and day centers—implement TB prevention and control measures.

## **B. Create & Enforce an Agency TB Policy**

The most effective way to promote a TB-free environment at your homeless service agency is to have a clear TB Policy. Your TB Policy should address the following:

1. Staff TB training/education requirements
2. Staff TB screening requirements
3. Environmental measures to reduce risk of TB transmission
4. Procedures for client and tenant health screening
5. Management and referral of sick clients, including implementation of a “Cough Alert” policy.

A sample TB Policy for Homeless Agencies is provided in Appendix G. It can and should be tailored to your agency. Technical assistance is available to your agency to help establish a TB policy. Contact the Health Care for the Homeless Public Health Nurse, Heather Barr, at (206) 296- 4656 for more information.

## **C. Review the Physical Layout of Your Facility & Options for Isolation of Sick Clients**

In overnight facilities, increasing the space between clients will aid in decreasing the spread of TB. Shelters should do what they can to increase the space between mats or beds, balancing the need to help people off the streets with the need to minimize the spread of TB, flu, and colds. No specific distances between beds/mats are recommended either by Washington State or the Centers for Disease Control at this time. Beds/mats should also be positioned so that clients are sleeping head-to-toe, thus minimizing the amount of shared air that the clients breathe.

If clients are coughing or appear to be ill, agencies should try to separate those clients from others. While this may not be possible in all facilities, a separate room that isolates sick clients from healthy clients is optimum. If clients’ health is assessed upon arrival at the program, they can be subtly directed to alternative beds/mats based on this assessment.

## **D. Offer Respiratory Protection**

Providing coughing clients/tenants with paper masks (either the blue surgical style masks or the flat pleated) that cover the mouth and nose is an effective TB control strategy. If a person who is coughing wears a mask, it serves as a useful tool to prevent the spread of germs because it captures germs before they enter the environment. In other words, wearing this kind of a mask helps prevent a sick person from spreading germs to others.

Wearing these kinds of masks does not, however, prevent a person from inhaling contaminated air. So, for example, wearing a mask will not prevent your staff or clients from breathing in TB germs that are already moving through the environment.

***Masks: the New Look of Respiratory Etiquette.*** The TB Control Program and Health Care for the Homeless understand that in many homeless service settings, clients may refuse to wear a mask. Stigma, cultural norms, concerns about what others will think or say, mental illness, substance use, comfort, and personal style may all come into play. However, agencies—especially those where TB risks are high—are encouraged to start with a small supply of masks and give it a try. Over time, a cultural shift could occur in some organizations. With new infectious diseases emerging around the globe, the use of masks in public and in health care setting is becoming more and more common. It is important that homeless agencies take steps to begin to introduce the use of masks, especially in crowded shelters and day centers where clients share the same breathing space. Share your experiences with TB Control and HCHN so that they can learn about what’s working and what is not.

If clients are unwilling to wear them or if masks are not available, clients should be encouraged to cover their mouths when coughing. Tissues should be readily accessible for use by both clients and staff. In addition to helping prevent the spread of TB, the use of masks and tissues helps stop the spread of viral infections such as colds and the flu.

### **Respiratory Protection Recommendations for Homeless-Serving Agencies**

- a) Coughing clients, tenants, and staff of homeless-serving agencies should be encouraged to wear a mask or cough into a tissue to help prevent the spread of TB. This also helps prevent the spread of colds and flu. Clients who are actively coughing should be referred to a medical provider for evaluation and treatment as necessary.
- b) Staff who are ill should not return to work until free of infection.
- c) It is recommended that each facility post sign(s) for client/tenant awareness and cough monitoring (available in Appendix I).
- d) Mask use is encouraged, but will be left to the discretion of agency staff and management. Each facility should have a stock of blue surgical masks on hand. Masks can be purchased through medical supply catalogues and generally cost anywhere from 10 to 50 cents per mask. Limited quantities of masks may be available from Health Care for the Homeless Network (HCHN); if an organization needs assistance in acquiring masks, they should contact HCHN at (206) 296-5091.
- e) To be effective, masks must be positioned to cover the nose and mouth. Masks that become wet or soiled are ineffective and should be thrown away. It is not possible to catch TB from handling a used mask, but staff should wear gloves when handling used masks and tissues to help prevent the spread of other diseases such as the flu and the common cold.

- f) Homeless agencies should have frequent, plastic-lined wastebaskets placed throughout the organization for the disposal of used masks and tissues.

## **E. Educate Your Clients and Tenants**

Educate your clients about TB symptoms:

1. Post signs in your facility (see Appendix I for examples) reminding coughing clients/tenants to cover their coughs, and listing the symptoms of TB.
2. Make TB a topic for a house meeting, if you hold such meetings with clients. Ask to have a nurse from Health Care for the Homeless or the TB Control Program attend to answer clients' questions.
3. Provide brochures about TB in your agency. Information is available through the resources listed in Appendix E.

As appropriate, you may want to educate a given client or tenant on what to expect if they have TB symptoms or active disease. Because you may have a trusting relationship with a client, your assurances can help convince a client to see a health care provider and to follow-through with treatment.

1. Reassure clients that TB is treatable and curable, and that treatment is free.
2. Public Health will ensure that clients being treated for TB have a safe place to live and have their basic needs met.
3. During the time clients with TB disease are contagious, they cannot stay at a shelter or visit day centers because they may expose others to TB. They will also need to stop hanging out in bars or other locations where they might expose their friends. Their health care provider will determine when they are no longer contagious, and will help clients understand where it is and is not safe for them to go.
4. Encourage clients to follow the instructions of their health care provider, and to comply with all instructions regarding taking medications.

## **F. Work With Public Health if a TB Case is Identified at Your Agency**

If a case of TB is associated with your agency, it is important that you cooperate with Public Health.

1. Clients with TB disease must immediately be removed from a shelter or day center setting. They are contagious and need daily treatment. Public Health will provide housing and case management, in addition to treatment, for these clients.
2. Public Health may begin "contact investigations" to learn who the individual spent time with – those people need to be tested for TB. We may ask for your help in locating specific clients.

3. If your agency is involved in helping locate close contacts because one of your clients has active TB, Public Health will be able to share with agency management the name of the individual who has TB.
4. Public Health may ask to see attendance logs of clients and staff: please cooperate by sharing the logs with Public Health TB Control Program staff when asked to do so. The logs are absolutely critical in helping prevent further spread of disease. Washington Administrative Code (WAC) 246-101-425 specifies that “Members of the general public shall cooperate with public health authorities in the investigation of cases or suspected cases, or outbreaks and suspected outbreaks of notifiable conditions or other communicable diseases...”
5. In certain circumstances, Public Health may wish to perform more extensive tests at or near your agency, including skin tests, sputum collection, chest x-rays, and more.

## **G. Assess Your Ventilation & Engineering Controls**

Whether you are an existing program, planning a remodel, or building a new facility, technical assistance is available to help ensure you are doing everything possible with ventilation and engineering controls to help prevent the spread of TB. Three types of engineering controls are used to prevent the transmission of TB in homeless facilities: ventilation, ultraviolet germicidal irradiation (UVGI), and high-efficiency particulate air (HEPA) filtration. All engineering controls should be used in conjunction with an established TB policy and other infection control measures. Each of these controls varies in cost and the level of complexity in implementation.

### ***Ventilation***

Adequate ventilation and controlling the direction of airflow is pivotal to improving air quality and decreasing the spread of tuberculosis. Ventilation is the movement of air to achieve dilution and air exchange in a specific area. Fresh air flow into a room or space is necessary for ventilation to be effective because re-circulating air in a room does not improve air quality in a way that prevents the spread of TB.

The simplest and least expensive ventilation technique is to dilute and exchange air by **maximizing natural ventilation through the opening of windows and doors**. More complex and costly methods involve mechanical ventilation through the use of fans or exhaust systems. In mechanical ventilation, it is important to use equipment with sufficient power to facilitate air entry into, and exhaust from, the room or area. All kinds of ventilation systems should be evaluated regularly to determine if they are functioning properly.

Ventilation systems need to be monitored and cleaned on a regular basis to ensure that they are effective. Ventilation system outlets, such as exhaust grilles, should be cleaned free of dust and lint every month so as to increase the amount of air movement. In mechanical air filtration systems, filters need to be changed at least 2 times per year or per directions provided by the manufacturer.

### ***Ultraviolet Germicidal Irradiation (UVGI)***

Laboratory experiments have shown that sufficient exposure to ultraviolet light kills TB bacteria. Homeless facilities can install UVGI lighting or make use of portable floor units. One of the benefits of UV lighting is that it is effective at killing both regular and drug-resistant TB. However, the efficacy of UVGI lighting for TB control in shelters is still being tested. There is a six-year study underway in 13 shelters around the country to assess the effect of UVGI and ventilation in preventing the spread of TB bacteria in the shelter setting. The Pine Street Inn shelter in Boston first installed ultraviolet light fixtures in the early 1980s. While no study was associated with the installation of the UVGI lights, the shelter reports that they've never had another case of tuberculosis among the staff since the UV lights were installed.

### ***High-Efficiency Particulate Air (HEPA) Filtration***

HEPA filter units can be a useful alternative to the installation of costly mechanical ventilation or UVGI lighting systems. The units can be free-standing or may be permanently attached to floors or ceilings. HEPA filtration units are high-efficiency air filtration units often used in hospitals, medical facilities, and other commercial settings. HEPA filters filter much smaller particles than other filtration systems and they are effective at filtering bacteria out of the air. HEPA filtration units are especially effective in high-density areas where there is little or no natural ventilation.

### **So What Should Your Agency Do?**

Making engineering improvements to a homeless facility may be cost prohibitive for many organizations. Agencies should implement engineering controls that are accessible and affordable. However, for new construction or as facility remodels and/or maintenance take place, engineering improvements should and in some cases must be incorporated into the design process.

**If you would like assistance in assessing your current environmental controls, contact the Public Health TB Clinic at (206) 731-4579.** The TB Clinic can help refer you to appropriate resources. When planning for construction or facility updates, an environmental consultant can make recommendations for air filtration systems that will be most effective given the number of individuals occupying the facility. Environmental recommendations need to be incorporated into the design process and an assessment should be done very early on in construction or remodel planning. It is important to locate an architect and contractor familiar in designing and constructing facilities that will provide the necessary ventilation to prevent the spread of TB.

# Section 4: Agency Staff & Volunteers: Education, Training, and Screening

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## A. Recommended Training

All homeless facilities should establish a TB Policy that includes a requirement of formal training of employed and volunteer staff. Requirements for TB training should also be incorporated into job descriptions and personnel policies. It is important that employees at all levels of a homeless-serving organization have an understanding of TB. Executive directors and upper level management should sufficiently understand the key elements of TB so that they provide appropriate leadership and support within their organization to help prevent TB. It may not be necessary for certain upper management positions to have annual TB refresher training; each agency can make that judgement call as appropriate. Agencies should also use judgement about requirements for volunteers: those who are anticipated to work very small numbers of *cumulative* hours (fewer than 10) will be at lower risk for TB.

When training staff and volunteers, homeless agencies should bear in mind the fact that risk factors vary from program to program. For example, the risk of TB transmission is greater in a congregate facility (where clients sleep in the same room) than it is in a facility where clients reside in individual units. Basic training recommendations are as follows:

1. All staff and volunteers should receive TB education within 30 days of starting work. This requirement should be incorporated into the agency's TB Policy. Options for accomplishing this requirement may include:
  - Viewing a PowerPoint presentation or video on TB education and prevention training for lay people (non health care workers); or
  - Participating in an agency-sponsored TB training program that addresses the topics in Section B.
2. Homeless agencies should keep records documenting which staff have received TB training and the dates. Staff should receive training when they first begin working for the agency and participate in a refresher training annually thereafter.
3. For homeless agencies where risk for TB is especially high, Public Health—Health Care for the Homeless Network may provide on-site annual TB/Communicable Disease training sessions for staff.
4. Various training materials, brochures, and videos are available through private and public resources. For suggestions on training materials appropriate for your agency, contact Public Health TB Control Program Manager at (206) 731-4579 or Health Care for the Homeless Network at (206) 296-5091. See also resources listed in Appendix E.

## **B. Sample TB Training Outline**

It is recommended that TB training be provided to all staff and cover, at a minimum, the following topics:

1. What is Tuberculosis?
  - a. TB prevalence in Seattle & King County
  - b. TB prevalence among the homeless population
2. Tuberculosis transmission: How it is given to others.
3. Interpretation of TB skin testing: What a positive skin test means.
4. The difference between TB infection and TB disease.
5. Who is at risk for TB infection and disease?
  - a. TB and HIV connection
  - b. Poor health
  - c. Drug use
6. The signs and symptoms of active TB disease.
7. The difference in TB skin test requirements for different types of staff and clients.
8. How to effectively ask a client about TB symptoms.
9. How to evaluate and handle clients who seek shelter and are suspected of having active TB disease.
10. Treatment and preventive therapy.
11. TB prevention measures: How can shelter staff protect themselves?
  - a. Where tissues and masks are stored
  - b. Importance of using tissues to cover coughs and other preventive measures
  - c. Ventilation
12. Identifying and referring persons for medical evaluation (Cough Alert Policy).
13. TB policies and procedures.
14. Referral mechanisms:
  - a. TB Clinic and other Public Health Clinics
  - b. HCHN clinics in shelters
15. The importance and means of maintaining confidential client information and records.

## **C. Recommended Screening for Homeless Agency Staff & Volunteers**

A TB counseling, screening, and prevention program for homeless agency staff—including volunteers who expect to work for cumulative hours of more than 10 hours—should be established to protect both

staff and clients. Screening requirements should be included in the agency TB policy, in job descriptions, and in personnel policies.

Homeless agency staff who have positive PPD test results should be identified and evaluated to rule out a diagnosis of active TB. Documentation of the results of the homeless shelter staff PPD screening program will contribute to evaluation of the effectiveness of current infection control practices. Please note that Public Health—Seattle & King County recommends different TB screening practices for homeless agency staff than it does for the clients of homeless agencies. These recommendations are based on well-researched models of TB control and efficient use of resources. If staff at a facility begin to have positive PPD test results, it can indicate the presence of infectious person at the facility.

## **1. Recommended Screening**

All homeless agency staff should be screened for TB on a biannual (every 6 months) to annual (every 12 months) basis, depending on the incidence of active TB cases at your facility. Public Health's TB Control Program can offer suggestions for your agency upon request. All homeless shelters should have a written and enforced policy that staff will be required to show proof of TB screening. Screening for TB consists of TB disease screening (symptom review and possibly chest x-ray and sputum examination) and Latent TB infection screening (TB skin test).

The first TB skin testing should be done prior to, or the first day of employment. If an employee has tested positive for TB in the past and can provide documentation of his/her status, s/he should not have another skin test (PPD). Instead, s/he should be screened with a chest x-ray or have a TB symptom assessment (questionnaire) to identify any symptoms of active TB.

Agencies should appoint one person responsible for documenting TB status and skin-test results of all staff and volunteers. The tuberculosis and immune status of staff members is confidential health information and individual privacy needs to be protected by law.

## **2. Two-Step TB Skin Testing**

Two step TB skin testing means that a second TB skin test is placed 1-3 weeks after the first skin test on all staff whose first skin test was negative (no skin reaction). The second test will detect boosting phenomena that might be misinterpreted as a skin-test conversion, and thus it helps to ensure that any staff members with an old TB infection are identified. Two-step testing is recommended for new hire employees.

Staff that have not had documented TB screening with a skin test within the last 12 months will be required to undergo two step baseline TB skin testing (1-3 weeks apart).

Two-step skin testing may prove to be a practical challenge for some programs to implement for new employees. While this is the ideal, recommended method of testing, a single skin test is better than



none. Without the two-step testing, an agency may potentially delay finding out information on the true TB status of an employee.

### **3. Staff Who Are Skin Test Positive (+PPD)**

Recommendations for staff who have positive skin tests:

- Have an initial chest x-ray or provide documentation regarding a chest x-ray (written report of a chest x-ray within the past 6 months).
- Complete symptom questionnaire (see Appendix F for a sample symptom questionnaire).
- Receive a medical evaluation to determine need for further workup or treatment.
- An administrator of the homeless agency should notify the TB Control Program of a new conversion (a new conversion is when a person has a positive PPD test after previously testing negative). Contact Linda Lake, TB Control Program, to report a new conversion by calling (206) 731-4579 or leave a message if it is weekend. TB Control Program may conduct a coordinated investigation if there are multiple converters at a shelter or other homeless service site because it may be an indicator of exposure to infectious TB at the facility.

### **4. Staff Who Are Symptomatic or Suspected of Having TB Disease**

Staff who are symptomatic (show signs of disease) or suspected of having active TB disease shall be required to have:

- An immediate medical evaluation through either TB Clinic at Harborview Medical Center, another Public Health Clinic site or at his/her private medical provider. The medical evaluation will include a PPD and/or chest x-ray within 48 hours.
- Be immediately excluded from workplace until confirmed non-infectious.

### **5. Staff Who Have HIV/AIDS or Compromised Immune Systems**

Immunocompromised staff or volunteers will need TB screening by symptom review and chest x-ray since TB skin testing may be falsely negative for these individuals. They also need informed counseling of potential risk of acquiring TB on the job due to their medical condition.

### **6. Resources for Staff TB Testing in Seattle-King County**

TB testing is available through most private physician offices. TB testing is also available at the following Public Health Clinic locations in King County:

- **TB Clinic at Harborview Medical Center** (206) 731-4579  
325 – 9<sup>th</sup> Avenue, Seattle, WA 98104  
*Walk-in appointments are available on Mon, Tues, Weds and Fri between 8:30-11:30 AM and 1:00-3:00 PM. Closed on weekends.*
- **Auburn Public Health Center** (206) 296-8400; (253) 833-8400 (Local)

20 Auburn Avenue, Auburn, WA 98002-5404

- **Columbia Public Health Center** (206) 296-4650  
4400 37th Avenue S., Seattle, WA 98118
- **Downtown Public Health Center** (206) 296-4755  
2124 Fourth Avenue, Seattle WA 98121
- **Federal Way Public Health Center** (206) 296-8410; (253) 838-4557  
33431 13th Place S., Federal Way, WA 98003
- **North Public Health Center** (206) 296-4765  
10501 Meridian Avenue N. Seattle, WA 98133
- **Northshore Public Health Center** (206) 296-9787  
10808 NE 145th St. Bothell, WA 98011
- **Renton Public Health Center** (206) 296-4700  
3001 NE 4th St. Renton, WA 98055
- **White Center Public Health Center** (206) 296-4646  
10821 8th Avenue SW, Seattle, WA 98146

Unless otherwise noted, TB testing is done by appointment for \$7 (this includes the administration and follow-up reading of the test).

In certain cases, Public Health may provide TB testing for staff at high-risk facilities and/or where cases of active disease have been confirmed. Because resources are limited, Public Health cannot provide this on-site service at all locations, and it is the responsibility of the homeless service agency to ensure that staff are tested for TB.

# Section 5: TB Screening of Homeless Agency Clients

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## A. Screening Clients at Admission

Clients who have a cough and are seeking shelter or services should not be turned away because they are coughing. However, homeless agency staff are encouraged to offer masks or tissues to a client who is coughing and provide education about the importance of covering one's mouth when coughing.

### Recommendations on admission:

- **Attendance Logs.** On a daily basis, all clients entering shelters or day centers must sign in or be signed in upon arrival at the facility. The client's first and last name should be clearly printed (legible) and it should be evident what date(s) the client stayed at the program. If the program rotates location, the sign-in log should also state the location of the program that night. If the program has a system for identifying bed numbers or locations, that would ideally be recorded in the log as well. This serves as a record should TB contact investigation become necessary. All client logs should be kept for a minimum of three months. If possible, keep records for six months.

Review of attendance logs was invaluable in the investigation of the 2002-03 outbreak, and allowed Public Health to quickly identify people who had been in close contact with people who had active TB disease.

### Health Assessment Recommendations:

- Many homeless service agencies conduct some form of intake to determine a given clients' needs and concerns. As part of this assessment, it is important to ask a series of health-related questions. Your agency assessment form should include questions specific to TB symptoms (see Appendix F).
- When a client with a cough is identified, he or she should be taken aside by shelter staff and asked if he/she has had a **cough for more than three weeks**.
- Shelter staff must ask if the client has had **one or more** of the following **clinical symptoms of TB Disease**.
  - Weight loss
  - Night sweats for more than a week
  - Fever for more than a week
  - Chronic fatigue/malaise
  - Bloody phlegm or coughing up blood
- Advise client to cover their nose and mouth with tissue when coughing.

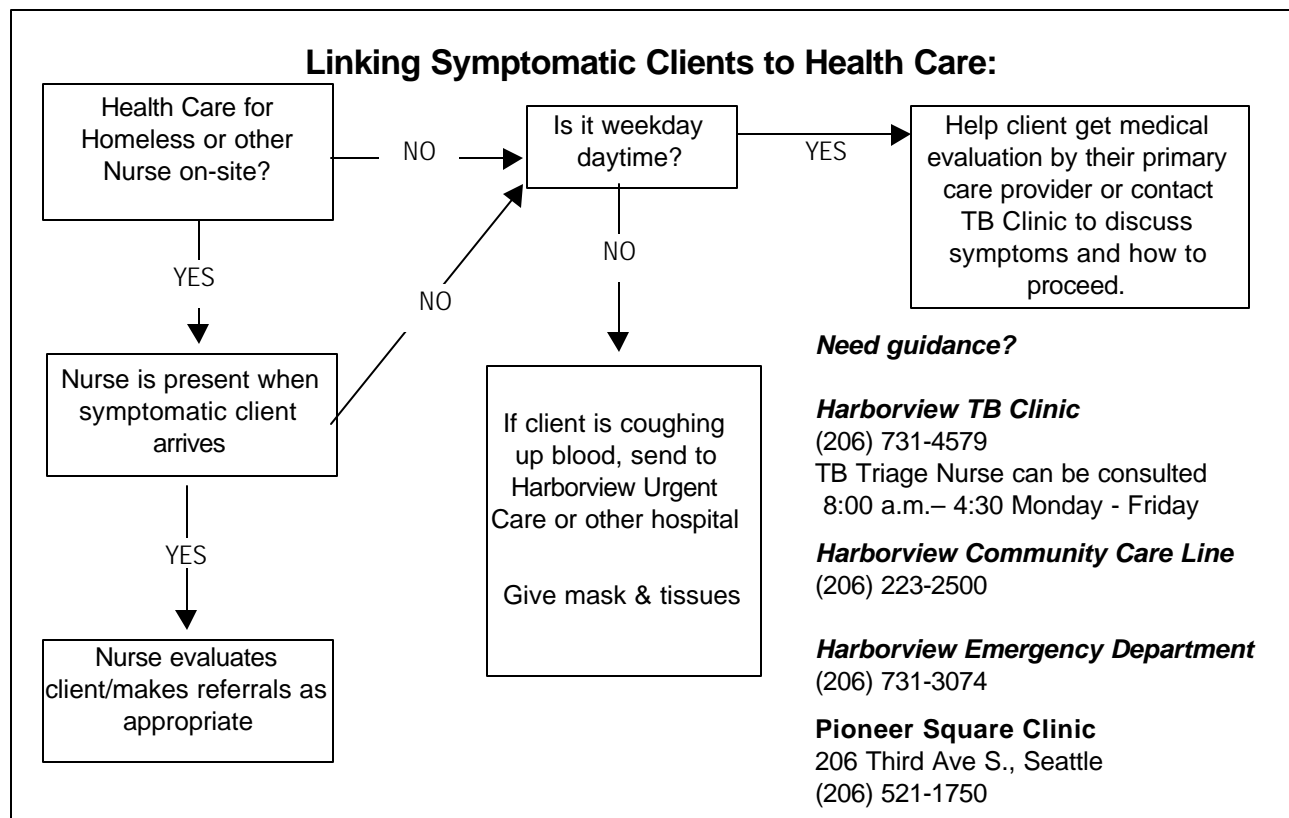
### Getting Symptomatic Clients to a Health Care Provider

- Homeless people may have serious coughs for many different reasons: colds and flu, smoking,

asthma, emphysema/chronic bronchitis (COPD), and TB – among others.

- All clients who have a chronic cough for **three weeks or more** should have the cough evaluated by a primary care medical provider.
- Each agency may have different procedures in place for referring sick clients to health care. If the client has a regular primary care provider, he or she should see that provider as soon as possible, ideally within 48 hours. If feasible, send the client by cab to a health care appointment, asking them to use a mask or tissue in the cab and in the clinic waiting area.
- If your program has an on-site nurse on duty, refer the client there.
- In downtown Seattle, Pioneer Square Clinic has same-day appointments available on weekdays. Clients should arrive as close to 7:00 a.m. as possible (8:00 a.m. on Wednesdays) to get an appointment that day.
- Note that coughing up blood is a serious symptom and clients should be evaluated as soon as possible. Help arrange an appointment that same day, or send the client to Harborview Urgent Care—and be sure to supply them with masks and tissues.

The chart below provides general referral guidelines and recommendations for medical evaluation of symptomatic clients.



Agencies that work with homeless people should be alert to *changes* in people's health status and do what you can to link sick clients to health care, whether it be through Harborview, Pioneer Square Clinic, Pike Market Medical Clinic, or another community or public health clinic. Agencies are *not* being asked to make a judgement call on whether a client has TB or not, but rather to pay attention to the symptoms of your clients and help them get to a health care provider. The TB Clinic Triage Nurse, available from 8:00 a.m. – 4:30 p.m. Monday-Friday, is available for consultation if you have concerns about a client's TB symptoms.

## **B. Managing Coughing Clients**

Shelters should consider implementing a “Cough Alert Policy” as a way to bring greater internal structure to identifying clients with chronic coughs. The policy can help ensure that the appropriate supervisors in your agency are informed about any clients with TB symptoms. A sample policy is included in Appendix H and can be tailored to your agency. Alternatively, your agency may have other policies and procedures into which a cough alert mechanism could be incorporated. If a Cough Alert Policy is implemented, shelter management should ensure that this policy is followed and is part of routine employee orientation.

## **C. Confirmation and Screening Tests for Suspected TB**

Symptomatic clients will be expected to have had a clinical evaluation through a primary care provider, Harborview, TB Clinic, or a Health Care for the Homeless nurse **within 48 hours**.

It is the policy of the TB Control Program to isolate patients with medically confirmed, or high clinical suspicion of active TB in their apartments or in a motel room, paid for by the TB Control Program, at least until they are no longer infectious. Some patients remain in motel rooms to facilitate their recovery, even after they are not contagious. If you know a client has been in treatment for active TB and has been isolated, you can contact the TB Control Program Manager to learn if the person has been cleared to return to your program.

# Section 6: Appendices

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## A. Glossary of Terms Related to TB

**Chest x-ray** - A picture of the inside of your chest. An x-ray can show whether TB bacteria have damaged your lungs.

**Contact** - A person who has spent time with a person with infectious TB.

**Directly Observed Therapy (DOT)** - A strategic method of helping patients take their medicines for TB. If you get DOT, you will meet with a health care worker every day or several times a week. You will meet at a place you both agree on. This can be the TB clinic, the shelter, under the freeway or any other location.

**Extra-pulmonary TB** - TB disease in any part of the body other than the lungs (for example, the spine, brain, kidney or lymph nodes).

**Isoniazid (INH)** - A drug used to prevent TB disease in people who have TB infection.

**Multidrug-resistant TB (MDR-TB)** - TB disease caused by bacteria that are resistant to at least two major TB medications. It is very difficult to cure MDR-TB and needs at least 18-24 months of treatment.

***M. tuberculosis*** - bacteria that cause latent TB infection and TB disease.

**Negative** - usually refers to a test result. If you have a negative TB skin test reaction, you probably do not have latent TB infection.

**Positive** - usually refers to a test result. If you have a positive TB skin test reaction, you probably have latent TB infection.

**Pulmonary TB** - TB disease that occurs in the lungs, usually producing a cough that lasts longer than 2 weeks. Most TB disease is pulmonary.

**Sputum** - Fluid from lungs which is tested to see whether there are TB bacteria present.

**TB Disease** - An illness in which TB bacteria are multiplying and attacking different parts of the body. The symptoms of TB disease include weakness, weight loss, fever, no appetite, chills, and sweating at night. Other symptoms of TB disease depend on where in the body the bacteria are growing. If TB disease is in the lungs (pulmonary TB), the symptoms may include a bad cough, pain in the chest, and coughing up blood.

**TB Infection** - A condition in which TB bacteria are alive but inactive in the body. People with TB infection have no symptoms, do not feel sick, cannot spread TB to others, and usually have a positive skin test reaction. However, they may develop TB disease later in life if they do not receive preventive therapy.

**TB Skin Test (Mantoux PPD Skin Test)** - A test that is often used to detect TB infection. If you have a positive reaction to this test, you probably have TB infection.

**Tuberculin** - a liquid that is injected under the skin on the lower part of your arm during a TB skin test. If you have latent TB infection, you will probably have a positive reaction to the tuberculin.

## B. Local & National TB Trends

Nationally, the incidences of tuberculosis have been declining since the 1950s. However, in King County, the annual cases of TB have fluctuated over time and have been rising since 2000. With an all time high of 178 cases in 1969, cases of active TB in King County reached an all-time low in 1985. However, there was a resurgence of the disease in the 1990s with 2002 marking the highest number of cases in the area in 30-years. It is believed that TB increased during the 1990s because of a rise in the numbers of homeless people living in congregate care settings and an influx of immigration from foreign countries where TB is not under control.

In 2002, there were 158 cases of tuberculosis in King County – this was a 52% increase over the number of cases in 1999 and was the third consecutive year with an increasing number of cases. In King County, the greatest risk factor for developing tuberculosis is foreign birth. In 2002, 73% of all TB cases were among foreign-born persons. The second greatest risk factor for TB is homelessness and the third is HIV infection. TB cases in people who are homeless accounted for 18% and in people with HIV infection accounted for 7% of all cases in 2002. Only 2% of cases did not fit into one of these three risk categories.

The TB Control Program at Public Health – Seattle & King County provides treatment to the majority of individuals with TB in King County.

### **Risk Factors for King County TB Cases 1995-2003 (risk categories are NOT mutually exclusive)**

|                       | <b>1995</b> | <b>1996</b> | <b>1997</b> | <b>1998</b> | <b>1999</b> | <b>2000</b> | <b>2001</b> | <b>2002</b> | <b>2003</b> |
|-----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Foreign Born          | 90<br>69%   | 83<br>65%   | 82<br>73%   | 78<br>67%   | 73<br>70%   | 100<br>79%  | 107<br>77%  | 116<br>73%  | 118<br>76%  |
| Homeless              | 21<br>16%   | 16<br>13%   | 12<br>11%   | 25<br>22%   | 13<br>13%   | 16<br>13%   | 12<br>9%    | 30<br>19%   | 35<br>22%   |
| HIV Infected          | 8<br>6%     | 5<br>4%     | 5<br>4%     | 9<br>8%     | 0<br>0%     | 6<br>5%     | 9<br>6%     | 11<br>7%    | 9<br>6%     |
| <b>Total TB Cases</b> | <b>130</b>  | <b>128</b>  | <b>113</b>  | <b>116</b>  | <b>104</b>  | <b>127</b>  | <b>139</b>  | <b>158</b>  | <b>156</b>  |



## Homeless TB Cases - Demographics

| <b>Gender</b> | <b>2002</b> | <b>2003</b> |
|---------------|-------------|-------------|
| Male          | 26 (87%)    | 27 (77%)    |
| Female        | 4 (13%)     | 8 (23%)     |
| Total         | 30 (100%)   | 35 (100%)   |

| <b>Age Group</b> | <b>2002</b> | <b>2003</b> |
|------------------|-------------|-------------|
| 22-42            | 12 (40%)    | 8 (23%)     |
| 42-51            | 8 (27%)     | 16 (46%)    |
| 52-78            | 10 (33%)    | 11 (31%)    |
| Total            | 30 (100%)   | 35 (100%)   |

| <b>Race</b>                 | <b>2002</b> | <b>2003</b> |
|-----------------------------|-------------|-------------|
| White Non-Hispanic          | 3 (10%)     | 7 (20%)     |
| Black (non-Hispanic)        | 12 (40%)    | 8 (23%)     |
| Hispanic                    | 4 (13%)     | 4 (11%)     |
| Asian/ Pacific Islander     | 1 (3%)      | 0 (0%)      |
| American Ind./Alaska Native | 10 (33%)    | 16 (46%)    |
| MultiRacial                 | NA          | NA          |
| Total                       | 30 (100%)   | 35 (100%)   |

| <i>King<br/>County<br/>homeless<br/>population</i> | <i>General<br/>King<br/>County<br/>population</i> |
|--|---|
| 38%  | 80%   |
| 37%  | 5%  |
| 10%  | 3%  |
| 4%   | 10%   |
| 5%   | 1%  |
| 6%   | NA  |
| 100%   |   |

## **C. TB & HIV**

Tuberculosis is particularly dangerous for people with HIV. Currently, TB is the leading cause of death for people with HIV – approximately one in three people with AIDS worldwide dies of tuberculosis. Because HIV infection weakens the immune system, people with HIV infection are at very high risk of developing TB disease once they have been exposed to TB bacteria. People with HIV infection are 100 times more likely to develop TB disease than people who do not have HIV. They are also more likely to develop extra-pulmonary TB than people with a healthy immune system.

HIV infection affects the likelihood that a person will get TB disease and it also affects the TB skin testing and treatment process. People with HIV/AIDS may have a negative PPD skin test even if they have TB infection. Because of complex interaction of HIV treatment with TB medications – medical providers of people co-infected with HIV and TB must take this into account and consider the best option for the particular patient.. Because of the risk factor for developing TB disease, medical providers often recommend that people co-infected with HIV and TB infection undergo preventive therapy.

Though more complicated to treat in people with HIV, TB is still curable and it is important for people with HIV who are exposed to TB bacteria to get screened and discuss preventive treatment options.

## D. TB Testing & Treatment in Seattle-King County

TB testing is available through most private physician offices. TB testing is also available at the following Public Health Clinic locations in King County:

- **TB Clinic at Harborview Medical Center** (206) 731-4579  
325 – 9<sup>th</sup> Avenue, Seattle, WA 98104  
*Walk-in appointments are available on Mon, Tues, Weds and Fri. between 8:30-11:30 AM and 1:00-3:00 PM*
- **Auburn Public Health Center** (206) 296-8400; (253) 833-8400 (Local)  
20 Auburn Avenue, Auburn, WA 98002-5404
- **Columbia Public Health Center** (206) 296-4650  
4400 37th Avenue S., Seattle, WA 98118
- **Downtown Public Health Center** (206) 296-4755  
2124 Fourth Avenue, Seattle WA 98121
- **Federal Way Public Health Center** (206) 296-8410; (253) 838-4557  
33431 13th Place S., Federal Way, WA 98003
- **North Public Health Center** (206) 296-4765  
10501 Meridian Avenue N. Seattle, WA 98133
- **Northshore Public Health Center** (206) 296-9787  
10808 NE 145th St. Bothell, WA 98011
- **Renton Public Health Center** (206) 296-4700  
3001 NE 4th St. Renton, WA 98055
- **White Center Public Health Center** (206) 296-4646  
10821 8th Avenue SW, Seattle, WA 98146

Unless otherwise noted, TB testing is done by appointment for \$7 (this includes the administration and follow-up reading of the test).

To treat TB several antibiotics need to be taken together over a period of usually 6 months to a year. For this treatment to be effective it's vital that these medicines be taken regularly and that the treatment is completed. Lengthy treatment is necessary because the bacteria grow very slowly and hide very well.

TB treatment is available, regardless of insurance status, at the TB Clinic at Harborview Medical Center. The TB Control Program supports people who are homeless and undergoing TB treatment by providing them with directly observed therapy, food, and a motel room for the duration of the treatment.

## **E. TB Information & Education Resources**

Contact the following for more information or to order TB educational materials:

### **American Lung Association of Washington**

2625 Third Avenue

Seattle, WA 98121

(206) 441-5100

<http://www.alaw.org/>

### **Centers for Disease Control and Prevention**

Division of Tuberculosis Elimination

1600 Clifton Rd. NE, Mailstop E-10

Atlanta, GA 30333

(404) 639-8120

Request line for free brochures, posters, and videotapes (888) 232-3228

<http://www.cdc.gov/nchstp/tb>

Website for TB Education & Training Resources

<http://www.findtbresources.org/>

### **Francis J. Curry National Tuberculosis Center**

3180 – 18<sup>th</sup> Street, Suite 101

San Francisco, CA 94110

(415) 502-4600

[www.nationaltbcenter.org](http://www.nationaltbcenter.org)

### **Health Care for the Homeless Information Resource Center**

Policy Research Associates, Inc.

345 Delaware Avenue

Delmar, NY 12054

(888) 439-3300 ext. 246

*TB resource kits, sample curricula, TB resource guides and annotated bibliographies are available*

<http://www.bphc.hrsa.gov/hchirc/>

### **Public Health Seattle & King County**

Tuberculosis Control Program at Harborview Medical Center

325 Ninth Avenue, Box 359776

Seattle, WA 98104

(206) 731-4579

<http://www.metrokc.gov/health/tb/index.htm>

### **Washington State Department of Health**

TB Program

PO Box 47837

Olympia, WA 98504

(360) 236-3447

<http://www.doh.wa.gov/cfh/tb/>

## **F. Sample Symptom Questionnaire**

Public Health – Seattle & King County’s Tuberculosis Control Program uses the following questionnaire to assess tuberculosis symptoms. You may want to include these types of questions as part of a larger health assessment tool for your agency, if appropriate given the type of services/housing you provide.

1. Have you had a new cough for the last 3-weeks?
2. If you have a chronic cough, has it changed or become worse in the last 3 months?
3. Do you ever cough up blood?
4. Have you lost weight in the last 3 months?
5. Do you sweat a great deal at night?
6. Have you had fevers in the last 3 weeks?
7. Have you answered these questions honestly and to the best of your ability?

If clients have symptoms of TB, help link them to health care as discussed in Section 5.

## G. Sample TB Policy for Homeless Agencies

### PURPOSE:

In almost all instances, TB is both preventable and curable if diagnosed and treated in a timely fashion. Therefore, to insure to the best extent possible the safety of staff, volunteers and clients \_\_\_\_\_ (name of agency) has instituted the following guidelines.

### POLICY:

All staff, volunteers, and clients are required to have tuberculosis (TB) screening and appropriate follow-up as needed. In addition to this policy, the agency promotes education and practices to minimize the risk of infection.

### PROCEDURES:

1. All staff and volunteers must have a two-step TB skin test and symptom assessment within 15 days of employment and annually thereafter. If the TB test is positive, the employee must have a chest x-ray and a statement from a physician indicating that he/she is free from communicable disease. If an individual has a documented previous positive skin test, he/she should not re-test. Instead, a physician statement that the person is free from communicable TB is required. If there is no documentation, the skin test should be repeated. Employees with suspected pulmonary TB will be excluded from work until a written physician clearance is obtained.
1. Results of TB screening remain strictly confidential and are treated as personal medical information.
1. All staff will instruct coughing persons to cover their mouths and offer masks and/or tissues.
1. All staff and volunteers are required to attend an annual TB prevention training from a community provider or agency staff person. Documentation of attendance at training will be kept on agency file.
1. \_\_\_\_\_ (name of person or position) is the TB Liaison and serves as a health resource for staff and clients, coordinates client TB training, and orders and distributes TB educational materials.
1. To assist clients in meeting their health needs, all clients shall receive a health assessment regarding TB and other health issues.
1. Identify and appropriately refer clients with symptoms of TB.
  - All staff must be proactive in identifying a person who is coughing or who has TB-like symptoms. Symptoms of TB are a progressive cough lasting three weeks or more, fever, fatigue, night sweats, unexplained weight loss and coughing up blood.

- Immediately provide this person with tissues or a mask to cover their cough and notify the agency's designated TB liaison person.
  - Conduct interviews with clients with TB-like symptoms in a well-ventilated room or outside. Suggested symptom assessment questions to ask are:
    - Have you had a new cough for the last 3-weeks?
    - If you have a chronic cough, has it changed or become worse in the last 3 months?
    - Do you ever cough up blood?
    - Have you lost weight in the last 3 months?
    - Do you sweat a great deal at night?
    - Have you had fevers in the last 3 weeks?
    - Have you answered these questions honestly and to the best of your ability?
8. TB education for clients will be provided at least annually and educational brochures will be available year round.
9. Environmental measures to reduce the risk of TB transmission will be followed as applicable: order and stock tissues and masks, open doors and windows to allow for adequate ventilation, position beds head-to-foot, provide regular maintenance of ventilation system, and replace lint air filters with pleated type filters.

I have read and understand the above TB policy.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



## H. Sample Cough Alert Policy

### Public Health – Seattle & King County COUGH ALERT POLICY AND PROCEDURES For Homeless Service Providers in King County

**Purpose:** For the early identification of active TB cases and the prevention of TB transmission in emergency shelters, day centers, transitional housing programs, SROs, safe havens, supportive housing, and other social service programs.

**Problem:** Unsuspected active TB can result in extensive spread to agency staff and clients. In Seattle-King County, homeless TB cases increased by 65% in 2002 and approximately 30% of all homeless TB cases were HIV infected. Malnutrition and other debilitating medical problems are common among the homeless and substance users entering shelters and the sobering centers, putting them at increased risk of TB exposure and disease progression.

The “cough alert” policy has been developed to protect the safety of homeless agency clients and staff from tuberculosis. Homeless agency employees play a key role in detecting communicable diseases because of familiarity with the clientele and facilities. This policy is to be implemented by facility staff working closely with clients. The cough alert should be instituted as defined below:

#### **Definition:**

1. Individuals coughing throughout the night **or**
2. Patient coughing for more than 2-3 weeks without improvement (especially if [1] the cough is accompanied with weight loss, night sweats and fever or [2] patient coughing up blood)

#### **Procedures:**

1. Instruct the client to cover nose and mouth when coughing and offer a mask or tissue to use.
2. Record the date, client name, dates served and give the information to assigned supervisor
3. Assigned agency staff will notify the coughing client confidentially that a medical evaluation is needed within 48 hours, and will assist the client in arranging an evaluation with their primary care provider or community clinic.
4. Evaluation should occur ASAP through one of the following mechanisms:
  - Client’s own primary care provider
  - Health Care for the Homeless Nurse (if program has one on-site)
  - Community clinic or public health clinic
  - TB Clinic
  - Harborview Urgent Care (if primary care appointment not available, or if client is coughing up blood)
5. *[Agency should insert here specific procedures, or replace above as appropriate]*

*Adapted with permission from the City & County of San Francisco Department of Public Health, TB Control Department.*



## **I. Sample Posters To Make & Post at Your Agency**

Posters can be tailored to your facility or program.

### **PLEASE COVER YOUR COUGH**

- If you are coughing frequently, please ask a staff person for a mask or tissues.
- Thanks for helping prevent the spread of colds, tuberculosis (TB), and the flu.

### **FLU SEASON IS HERE**

- Please cover your mouth when you cough.
- Coughing spreads colds, tuberculosis (TB), and the flu.

### **TUBERCULOSIS (TB) SPREADS THROUGH COUGHING**

- Please cover your mouth when you cough
- Please use a tissue or a mask to cover your cough

### **DO YOU HAVE TUBERCULOSIS (TB) SYMPTOMS?**

- A chronic cough lasting more than 3 weeks?
- Weight loss?
- Night sweats lasting more than 3 weeks?
- Fever lasting more than 3 weeks?
- Bloody phlegm or sputum?

**If yes**, please talk a staff person who will help you see a nurse or other health care provider.

- TB is treatable and curable
- Treatment for TB is free

## J. Sample Handout for Staff

### Think Tuberculosis (TB)

#### For Staff Working in Homeless Shelters & Day Centers

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**Help identify clients that have TB symptoms. Untreated, TB can kill people. Seattle-King County experienced a serious rise in TB among homeless people in 2002-03, and the outbreak is not yet over. TB is treatable and curable, and treatment is free.**

#### Does the client have one or more TB symptoms?

- ☒ A cough that lasts longer than 3 weeks?
- ☒ Weight loss?
- ☒ Night sweats lasting more than 3 weeks?
- ☒ Fever lasting more than 3 weeks?
- ☒ Bloody phlegm or sputum?

#### What to do:

- ☒ Ask the client to cover their cough: offer tissues & masks.
- ☒ If your program has an on-site nurse, refer the client to the nurse.
- ☒ Help the client get evaluated by a primary health care provider. Clinics such as Pioneer Square Clinic, Downtown Public Health Center, Pike Market Medical Clinic, Seattle Indian Health Board and Harborview are choices in the downtown Seattle area. [*Tailor as appropriate for your agency's location*]
- ☒ If the client is coughing up blood, this is a serious symptom. Day or night, help them get to health care. Send client to Harborview Urgent Care if needed.

#### Guidance & Advice:

For guidance on where to direct a symptomatic client:

TB Clinic Triage Nurse: (206) 731-4579. Monday-Friday 8:00 a.m. – 4:30 p.m.

Pioneer Square Clinic (206) 521-1750 Monday – Friday 7:00 a.m. – 5:00 p.m.  
(except Wednesdays: 8:00 am. – 5:00 p.m.)

Harborview Emergency Department: (206) 731-3074

To request technical assistance on TB training, policies, and masks/tissues:

Heather Barr, Public Health Nurse, Health Care for the Homeless Network.  
(206) 296-4656

## K. Tuberculosis & The Law

Washington Administrative Code, Section 246-170 pertains specifically to TB prevention, treatment, and control. The WAC states that “Each county, city-county and district health officer is responsible for the control of tuberculosis within a jurisdiction. Each health officer shall act as or shall designate a physician to act as tuberculosis control officer. This individual shall coordinate all aspects of the prevention, treatment, and control program.” For King County, Dr. Masa Narita serves as the TB Control officer.

TB is a condition that is subject to mandatory reporting—that is, when a health care provider or health care facility in King County confirms a case of TB, they must report it to Public Health.

**WAC 246-101-425 Responsibilities of the general public.** (1) Members of the general public shall:

- (a) Cooperate with public health authorities in the investigation of cases and suspected cases, or outbreaks and suspected outbreaks of notifiable conditions or other communicable diseases; and
  - (b) Cooperate with the implementation of infection control measures, including isolation and quarantine.
- (2) Members of the general public may notify the local health department of any case or suspected case, or outbreak or potential outbreak of communicable disease.

[Statutory Authority: RCW [43.20.050](#) 00-23-120, § 246-101-425, filed 11/22/00, effective 12/23/00.]

### **Selections from WAC 246-170:**

**WAC 246-170 Responsibilities of Public Health.** The WAC requires that Public Health provide the following:

- (1) Each local health department shall assure the provision of a comprehensive program for the prevention, treatment, and control of tuberculosis. Services shall include:
  - (a) Prevention and screening, with emphasis on screening of high risk populations;
  - (b) Diagnosis and monitoring, including laboratory and radiology;
  - (c) Individualized treatment planning consistent with American Thoracic Society/Centers for Disease Control and Prevention statements based on the least restrictive measures necessary to assure appropriate treatment; and
  - (d) Case management.
- (2) In the absence of third party reimbursement, the local health department shall assure the provision of inpatient or outpatient care, including DOT/DOPT and case management.
- (3) Each local health department shall maintain a register of all diagnosed or suspected cases of

tuberculosis. In addition, each local health department shall also maintain a register of individuals to whom that health department is providing preventive therapy. Quarterly status reports on suspected and diagnosed cases shall be furnished to the department of health tuberculosis control program.

(4) A physician knowledgeable in the diagnosis and treatment of tuberculosis approved by the department shall be available to provide review of diagnoses, plans of management and, if appropriate, discharge from inpatient facilities.

(5) Sufficient nursing, clerical, and other appropriate personnel shall be provided to furnish supervision of preventive and outpatient treatment, surveillance, suspect evaluation, epidemiologic investigation, and contact workup.

[Statutory Authority: ESB 6158 and chapter [70.28](#) RCW. 95-04-035, § 246-170-031, filed 1/24/95, effective 1/24/95.]

**WAC 246-170-051 Procedures for involuntary testing, treatment, and detention.** (1) A local health officer shall make reasonable efforts to obtain voluntary compliance with requests for examination, testing, and treatment prior to initiating the procedures for involuntary detention.

(2) If the local health officer has reason to believe that:

(a) A person is a suspected case, and that the person has failed to comply with a documented request from a health care practitioner or the local health officer to submit to examination and testing;

(b) A person with confirmed tuberculosis is failing to comply with an individual treatment plan approved by the local health officer;

(c) A person who is either a suspected or confirmed case and is failing to comply with infection control directives issued by the local health officer; or

(d) A person is a suspected or confirmed case of tuberculosis based upon generally accepted standards of medical and public health science. A local health officer shall investigate and evaluate the factual basis supporting his or her "reason to believe"; then the health officer may detain the person, cause the person to be detained by written order, or petition the superior court *ex parte* for an order to take the person into emergency detention for testing or treatment, or both. The period of detention shall not exceed seventy-two hours, excluding weekends and holidays.

(3) At the time of detention the person detained shall be given the following written notice:

NOTICE: You have the right to a superior court hearing within seventy-two hours of detention, excluding holidays and weekends. You have the right to legal counsel. If you are unable to afford legal counsel, then counsel will be appointed for you at government expense and you should request the appointment of counsel at this time. If you currently have legal counsel, then you have an opportunity to contact that counsel for assistance.

You have a right to contest the facts alleged against you, to cross-examine witnesses, and to present evidence and witnesses on your behalf.

You have a right to appeal any decision made by the court.

You may be given appropriate TB medications only on your informed consent, or pursuant to a court order.

(4) If a person is involuntarily detained under this section, within one judicial day of initial detention, the local health officer shall file with the superior court in the county of detention a petition for detention. A petition filed under this section shall specify:

(a) The basis for the local health officer's belief that the respondent is either a suspected or confirmed case; including the name, address and phone numbers of whom the health officer expects to testify in support of the petition for detention and identification of any and all medical tests and records relied upon by the local health officer;

(b) The specific actions taken by the local health officer to obtain voluntary compliance by the respondent with recommended examination and testing or treatment, as the case may be;

(c) The nature and duration of further detention or other court-ordered action that the local health officer believes is necessary in order to assure that the respondent is appropriately tested or treated;

(d) The basis for believing that further detention or other court-ordered action is necessary to protect the public health; and

(e) Other information the local health officer believes is pertinent to the proper resolution of the petition.

(5) Service on respondent. The health officer shall serve a copy of the petition on the individual named therein at the time of the detention. If the person informs the health officer that he or she is represented by legal counsel, service on such counsel shall be made by delivering a copy of the petition to the attorney's office no later than the time of filing the petition with the superior court.

[Statutory Authority: ESB 6158 and chapter [70.28](#) RCW. 95-04-035, § 246-170-051, filed 1/24/95, effective 1/24/95.]

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